

66. A kiosk, as in claim 45, where the application is a customized application that is customized to a user.

67. A kiosk, as in claim 45, where the application program is an access to the Internet.

68. A kiosk, as in claim 67, where the kiosk charges the user for the access to the Internet.

69. A kiosk, as in claim 67, where the access to the internet provides a communication link between one or more second users through one or more designated servers.

70. A kiosk, as in claim 69, where the communication link includes any one or more of the following: voice, video, electronic mail, data, and web page sharing.

71. A kiosk, as in claim 45, where the application is a communication application.

72. A kiosk, as in claim 71, where the communication application includes any one or more of the following: a telephone call, an electronic mailing, a teleconference, a fax transmission, a training session, a search for information on the network, and a web based collaboration.

73. A kiosk, as in claim 45, where the application is a service application.

74. A kiosk, as in claim 73, where the service application includes any one or more of the following: an advertisement, a service charge, and a request for service.

75. A kiosk, as in claim 45, where the application is providing information in a tangible medium.

76. A kiosk, as in claim 45, where the application configures the display to render a web page that contains multimedia information that includes any one or more of the following: a schedule, a menu, a seating arrangement, a map, one or more soft keys, a form, an advertisement, and an image of a product.

77. A kiosk, as in claim 45, where the device subset includes a printer and the application configures the printer to print any one of the following: a receipt, a check, a web page, a coupon, a ticket, a pass, and a form.

5

78. A kiosk, as in claim 45, where device subset includes any one or more of the following: a microphone, a speaker, and a phone set that are configured by the application to become a public telephone.

10

79. A kiosk, as in claim 45, where the device subset includes a microphone, a speaker, and a video conferencing system that are configured by the configuration set to become a video conferencing terminal.

15

80. A kiosk, as in claim 45, where the device subset includes a camera that is configured by the application to take pictures of one or more of the following: the user, a scene surrounding the kiosk, and a document.

20

81. A kiosk, as in claim 45, where the device subset includes a media writer that writes to a storage media and the application configures the media writer to write any one of the following: music, software, text, graphics, educational material, and multimedia information.

25

82. A kiosk, as in claim 45, where the device subset includes a media reader capable of reading a recorded media, where the media reader is configured by the configuration set to input information recorded on the recorded media.

30

83. A kiosk, as in claim 82, where the recorded media is any one of the following: a memory on an electronic card, a computer diskette, a magnetic tape, a CD ROM, and a memory storage device.

84. A kiosk, as in claim 45, where the control program is a Java applet.

35

85. A kiosk, as in claim 84, where the one or more of the driver programs has a Java program that communicates through an interprocess communication with a device API that controls one or more of the local driver programs.

40

86. A kiosk, as in claim 45, where one or more of the embedded control functions is an ActiveX control.

87. A kiosk, as in claim 45, where one or more of the embedded control functions is a plug-in control.

88. A method of configuring a kiosk, comprising the steps of:

5 accessing one or more configuration sets of one or more files from a network, at least one of the files having an embedded control function;
 executing the embedded control function to invoke an API function that selects a subset of local driver APIs and communicates with the subset to control one or more peripheral devices of the kiosk to perform
10 an application associated with the configuration set.

89. A kiosk comprising:

 one or more peripheral devices means for performing a device action;
 one or more local program means for driving each of the peripheral
15 device means;

 a browser means for fetching one or more configuration sets of one or more files from the network through one or more network connections, one or more of the configuration sets having at least one embedded control function means, one or more of the configuration sets being associated
20 with a kiosk application, the embedded control functions means for selecting a local subset of one or more of the local programs and for communicating with the local subset to cause the local programs in the local subset to drive a device subset of one or more of the peripheral device means to perform device actions to configure the kiosk to perform
25 the kiosk application.

90. A server comprising:

 one or more connections to a network, one or more requests received through the connections;

30 one or more configuration sets having one or more files and at least one embedded control function, one or more of the configuration sets being associated with an application, the embedded control functions capable of selecting a driver subset of one or more of the driver programs and communicating with the driver subset to cause the driver programs to
35 control a device subset of one or more of the local kiosk functions to configure one or more kiosks to perform the application.

91. A server, as in claim 90, where the request comes from one or more of the kiosks to be configured.

92. A server, as in claim 90, where the request comes from an agent computer.

93. A server, as in claim 90, where the configuration sets include any one of the following: a remote device control, a remote message display, a file transfer, and an agent/client collaboration.

94. A server, as in claim 90, where one or more of the embedded control functions are a system monitoring program for determining operating status of one or more of the local kiosk functions of one or more kiosks.

95. A server, as in claim 94, where the operating status is used to determine any one or more of the following: maintenance required for one or more of the peripheral devices, maintenance history for one or more of the peripheral devices, which application files to serve on the network to respond to one or more of the requests, and marketing information about one or more kiosk users.

96. A server, as in claim 94, where the operating status determines which configuration sets the server will serve on the network.

97. A server, as in claim 90, where the configuration sets comprise one or more HTML files having zero or more hypertext components.

98. A server, as in claim 90, where the application is a financial application.

99. A server, as in claim 98, where the financial application includes any one or more of the following: providing a user with financial information, opening an account, dispensing cash, paying bills, applying for loans, making deposits, applying for a mortgage, making a loan payment, making a mortgage payment, getting financial advice, trading one or more capital assets, and obtaining assistance from an agent.

100. A server, as in claim 90, where the application is a customized application that is customized to a user.

101. A server, as in claim 90, where the application program is an access to the internet through one or more kiosks that the configuration set configures.

102. A server, as in claim 101, where the access to the internet provides a communication link between one or more second users through one or more designated servers.

5 103. A server, as in claim 90, where the application is a communication application.

10 104. A server, as in claim 103, where the communication application includes any one or more of the following: a telephone call, an electronic mailing, a teleconference, a fax transmission, a training session, a search for information on the network, and a web based collaboration.

15 105. A server, as in claim 90, where the application is a service application.

106. A server, as in claim 105, where the service application includes providing any one or more of the following: an advertisement, a service, and a service charge.

20 107. A server, as in claim 90, where the application is providing information to a user using a kiosk configured by the configuration set.

25 108. A server, as in claim 90, where one or more of the embedded control functions is capable of causing one or more of the kiosks to request one or more of the configuration sets.

109. A method, performed by a server on a network, comprising the steps of:

30 receiving a request from one or more kiosks connected to the network;

35 sending, to the kiosk, one or more configuration sets having one or more files and at least one embedded control function, one or more of the configuration sets being associated with an application, the embedded control functions capable of selecting a driver subset of one or more of the driver programs and communicating with the driver subset to cause the driver programs a device subset of one or more local kiosk functions to configure the kiosk to perform the application.

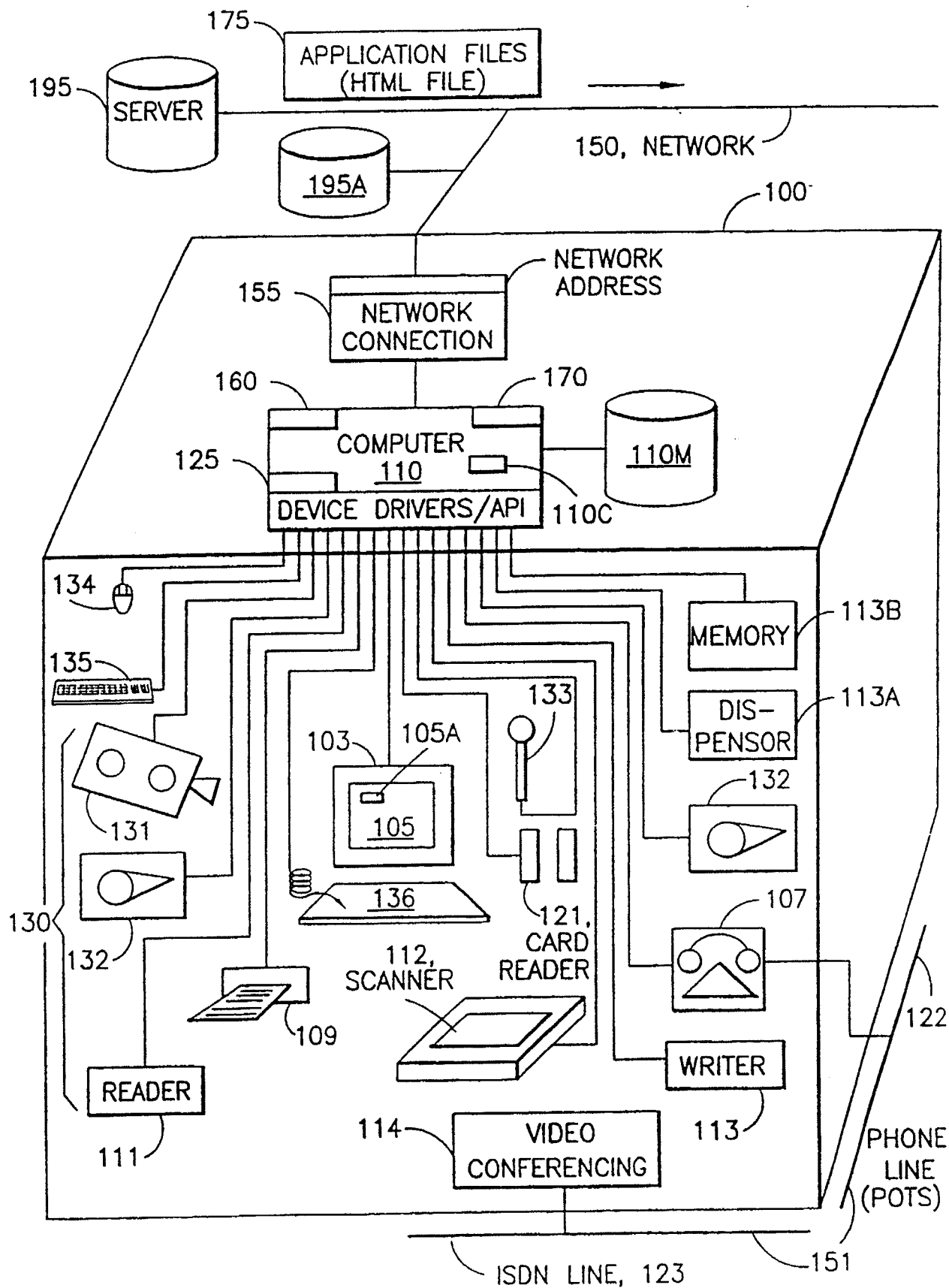


FIG. 1

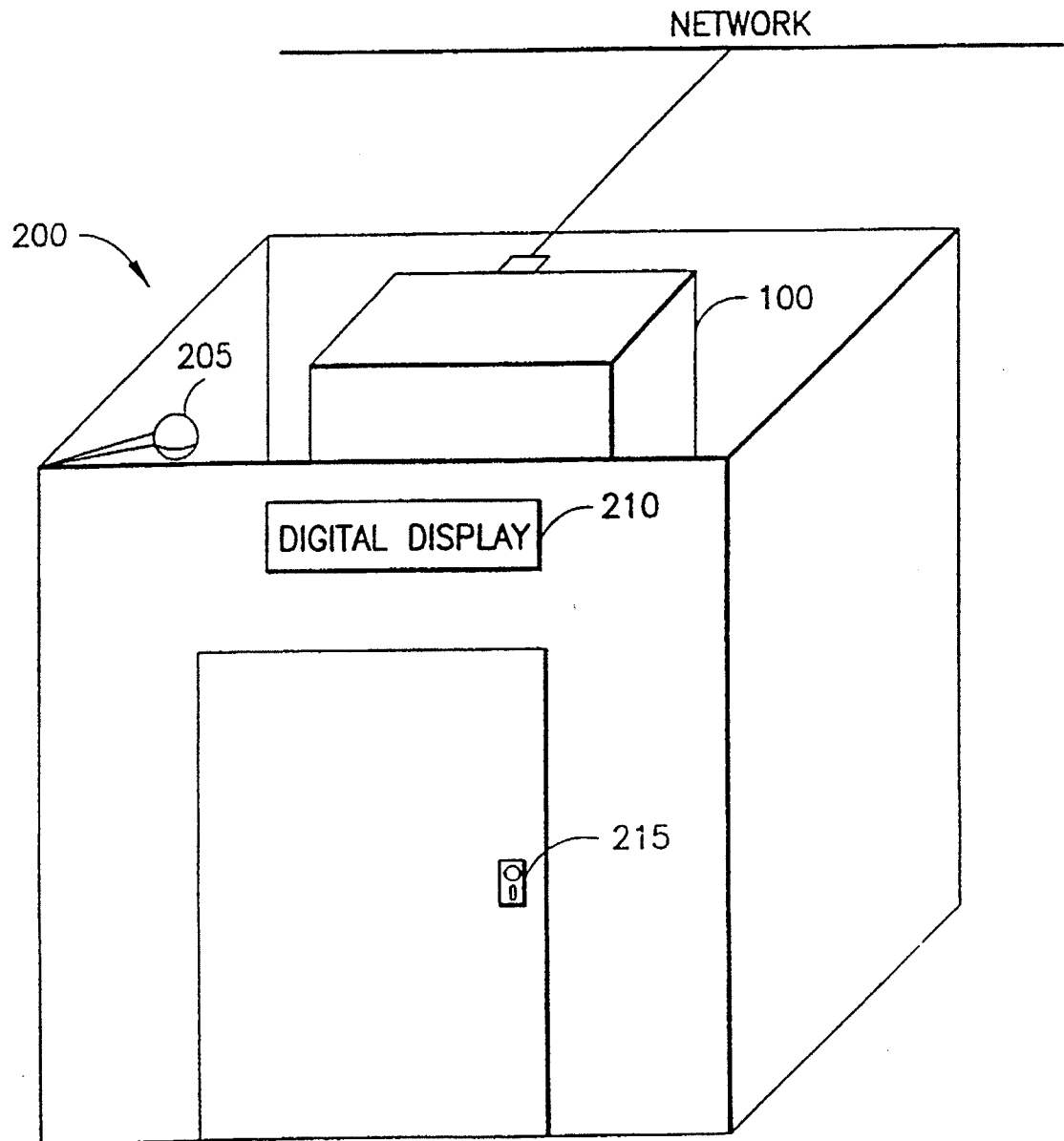


FIG.2

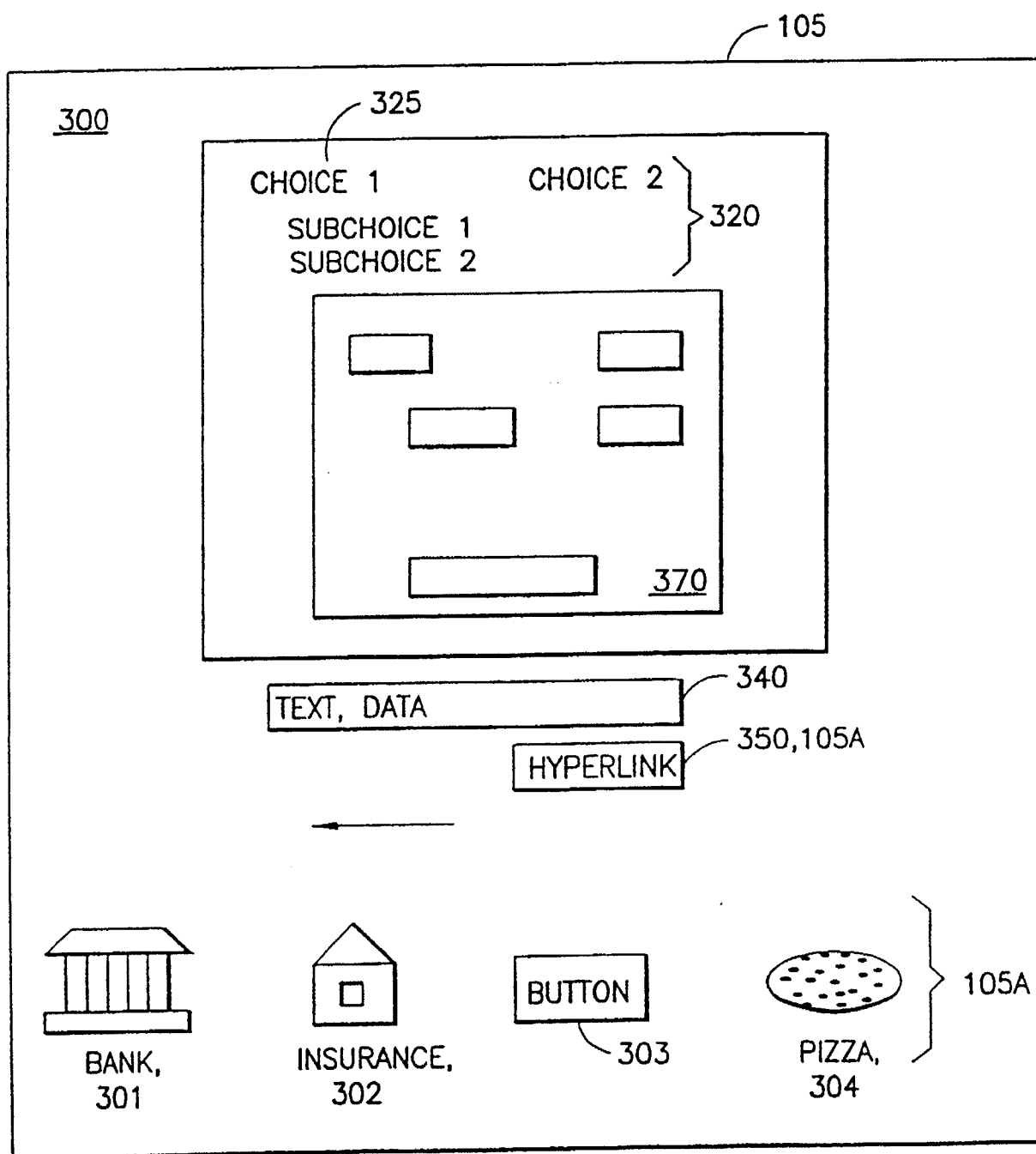


FIG.3

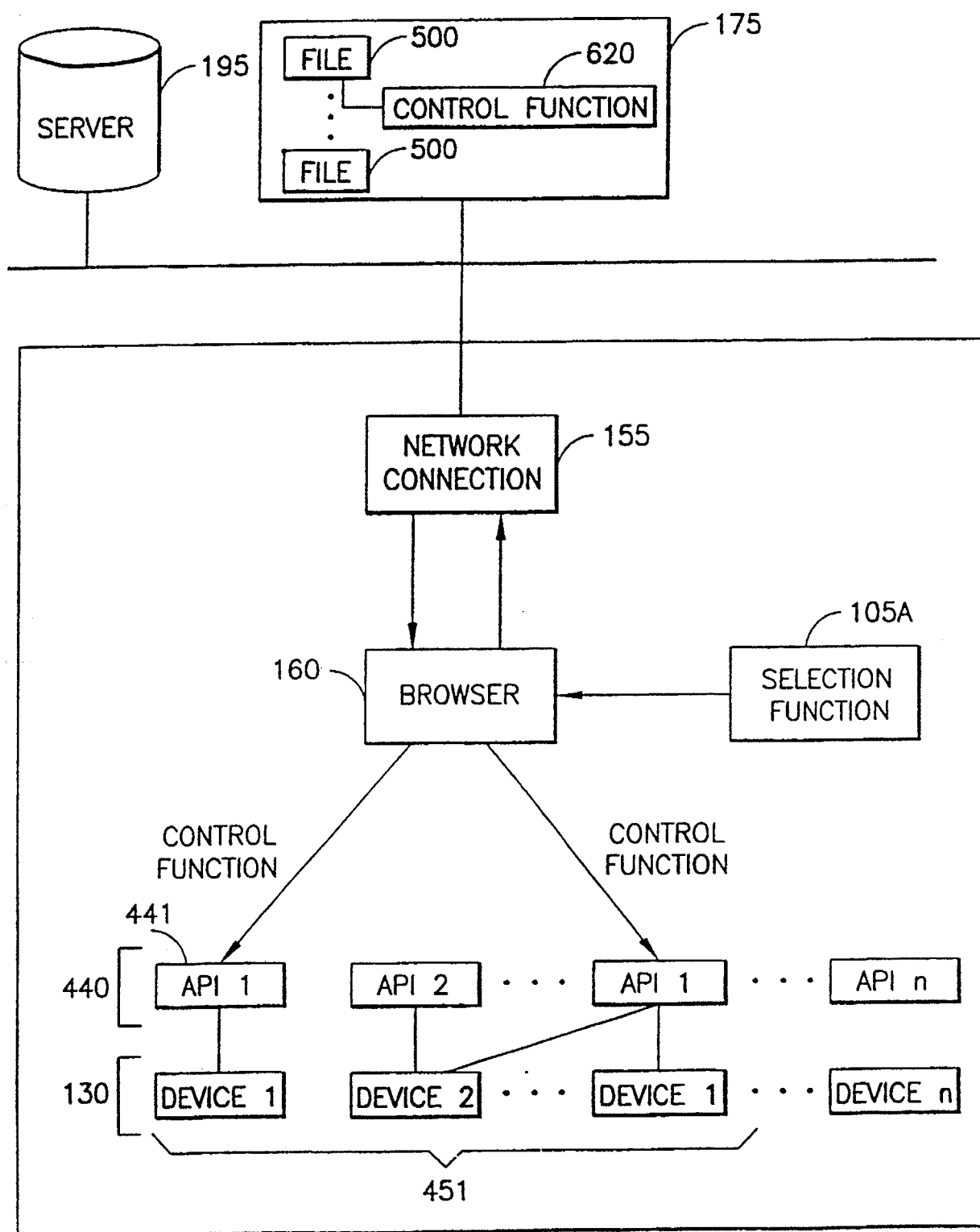


FIG.4

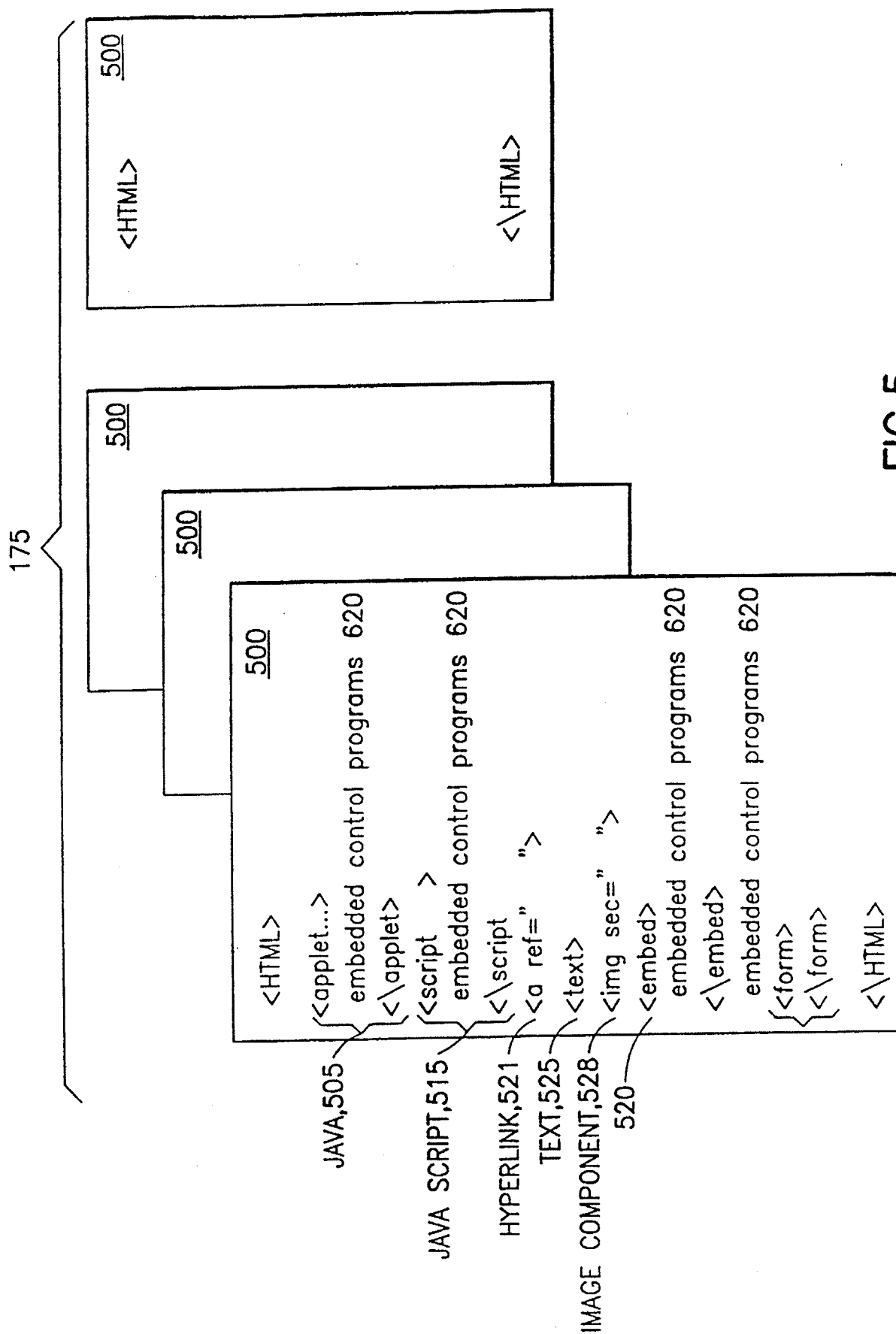


FIG.5

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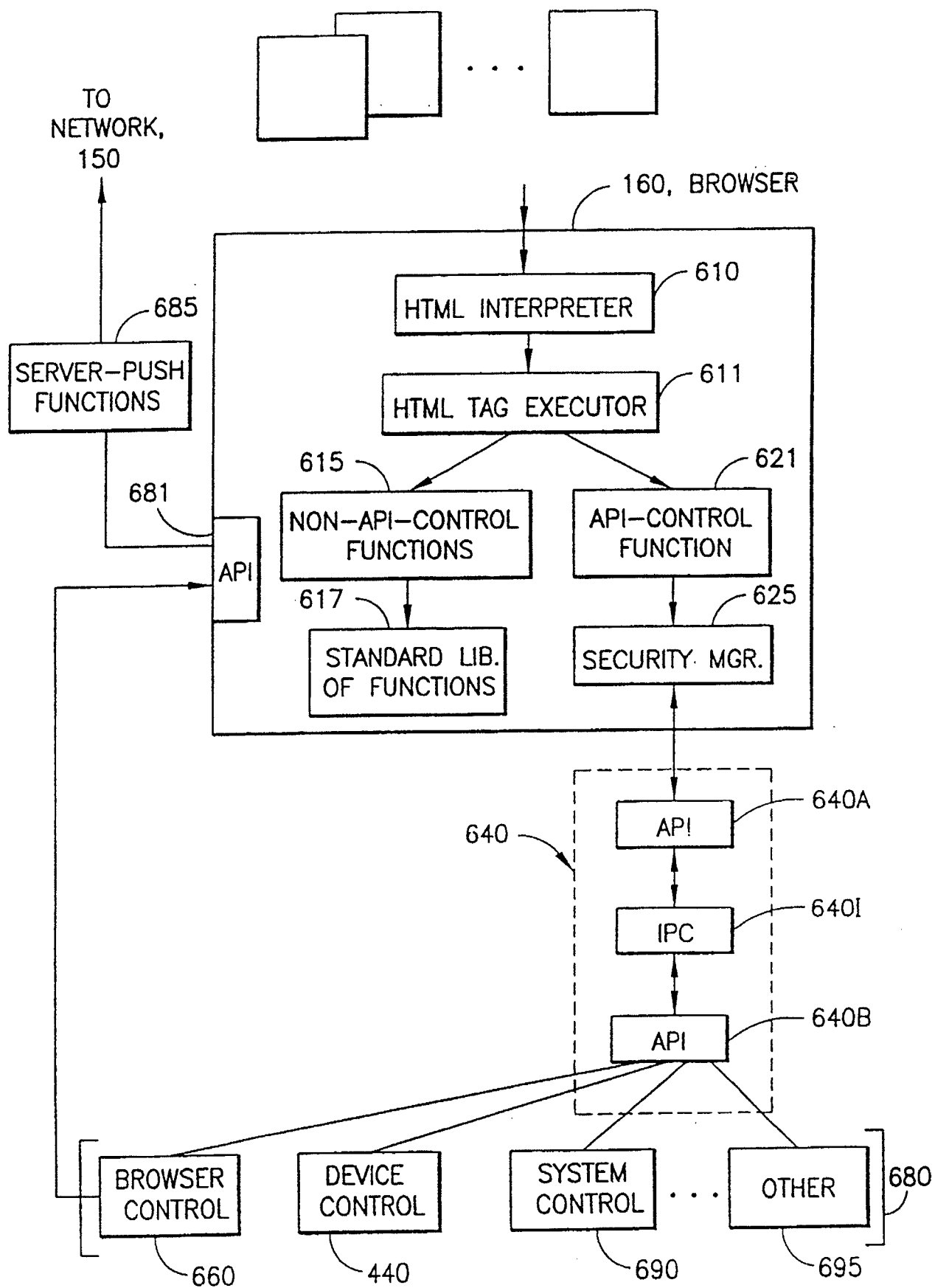


FIG. 6

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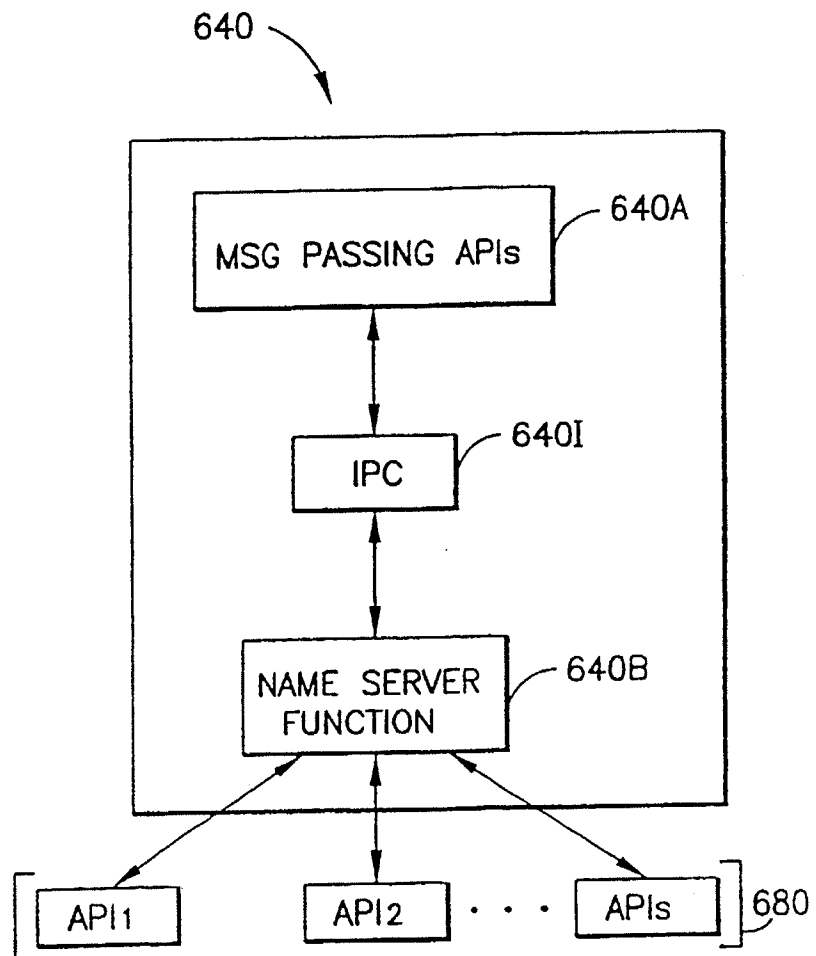


FIG.6A

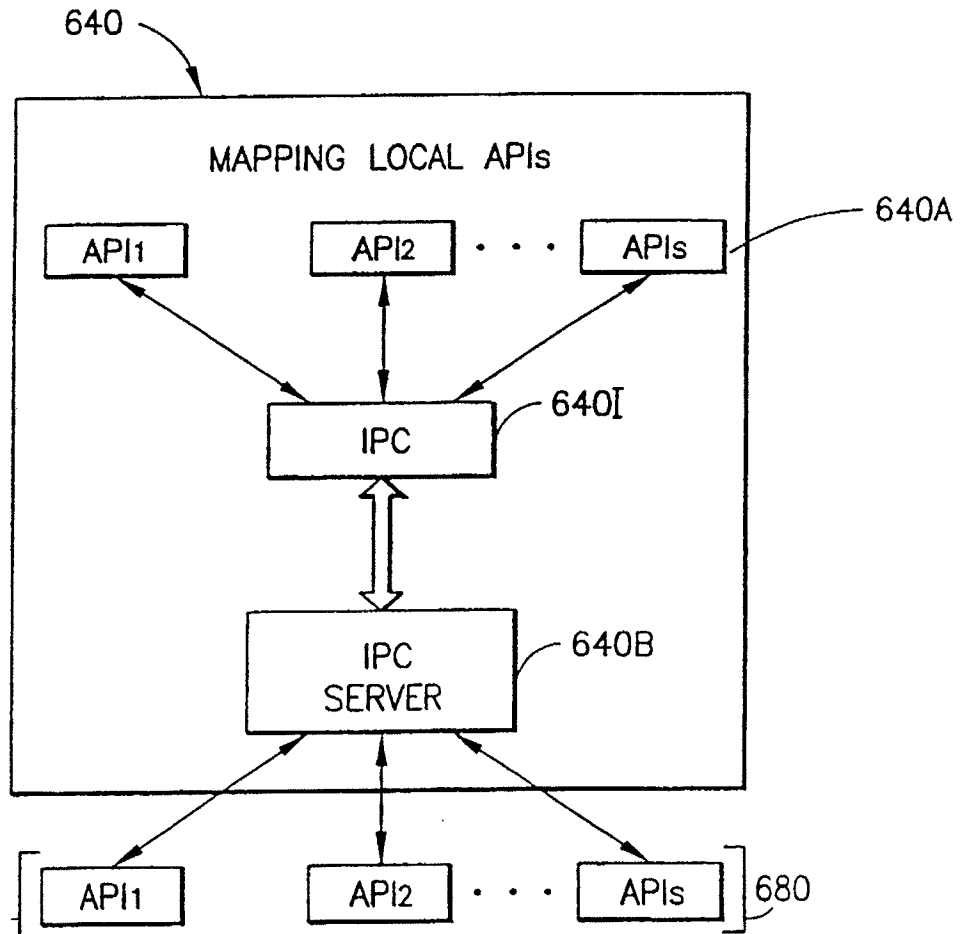


FIG.6B

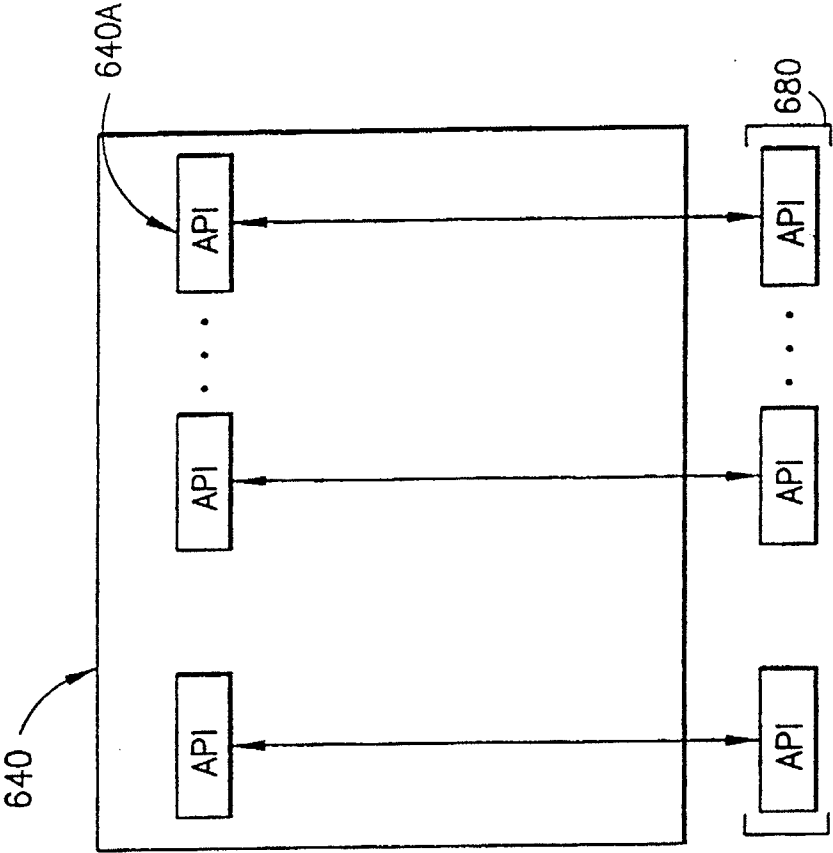


FIG.6D

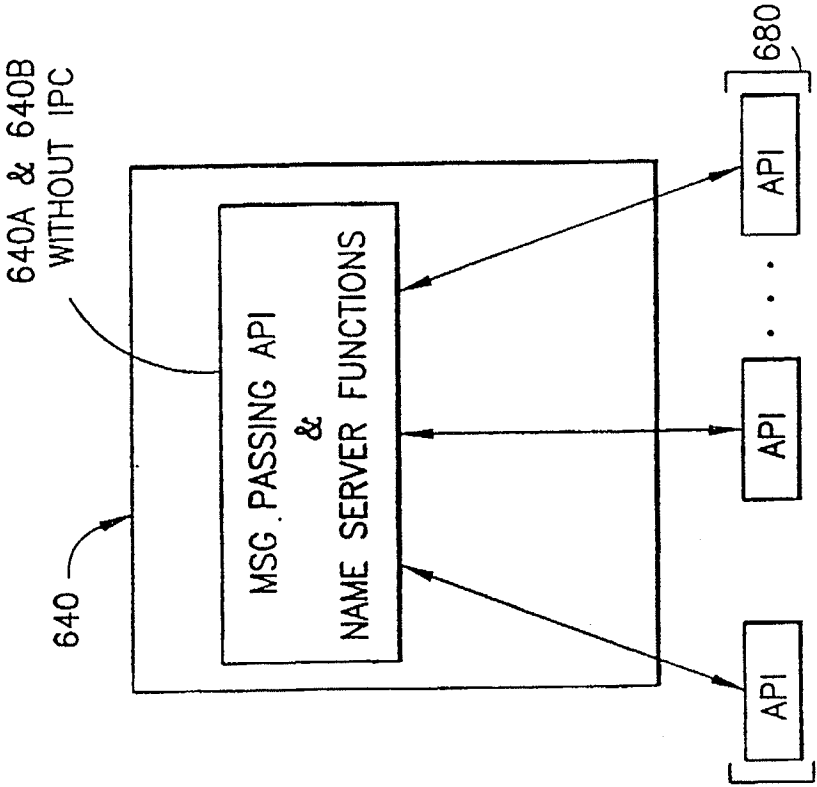


FIG.6C

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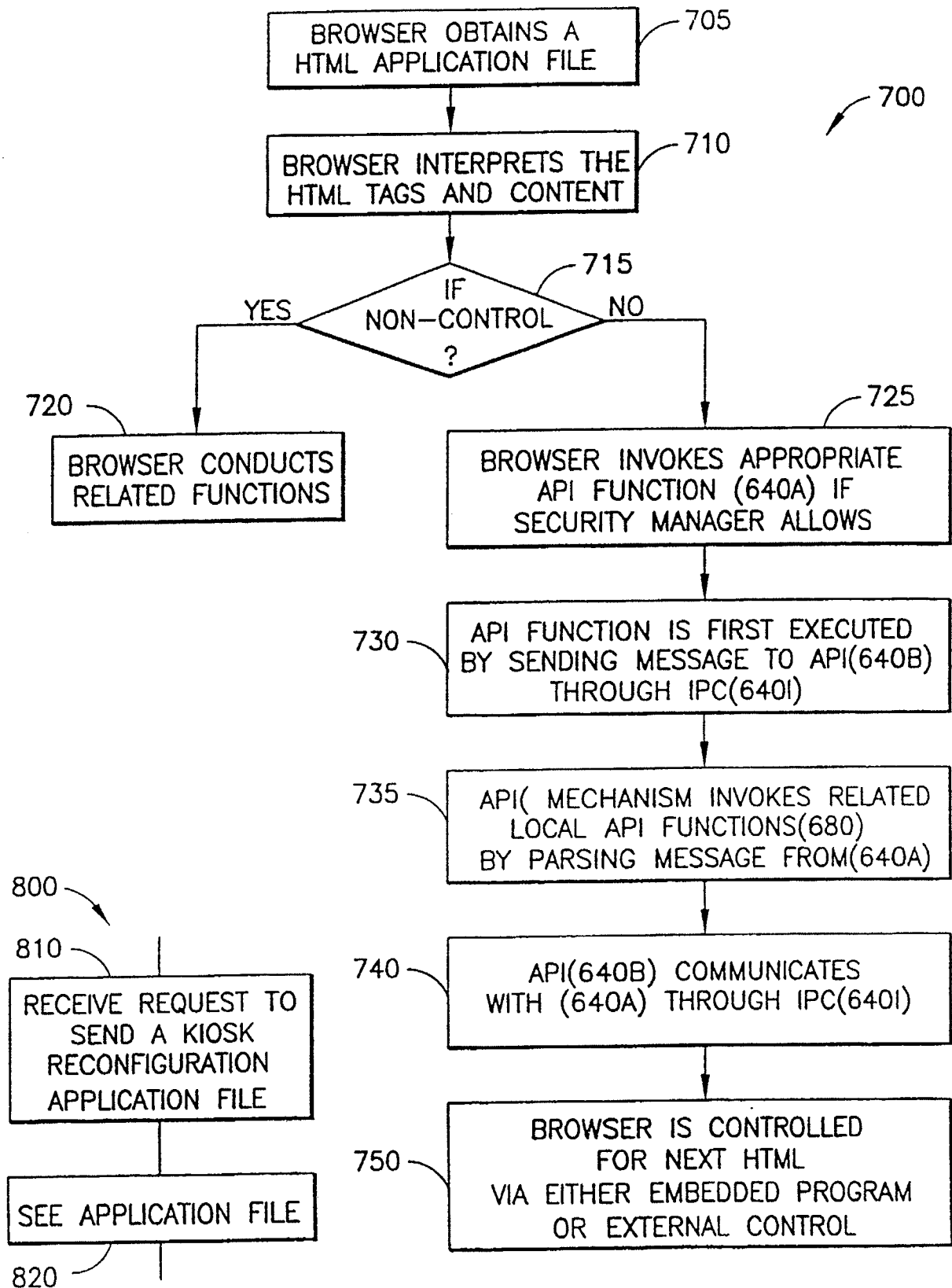


FIG.8

FIG.7

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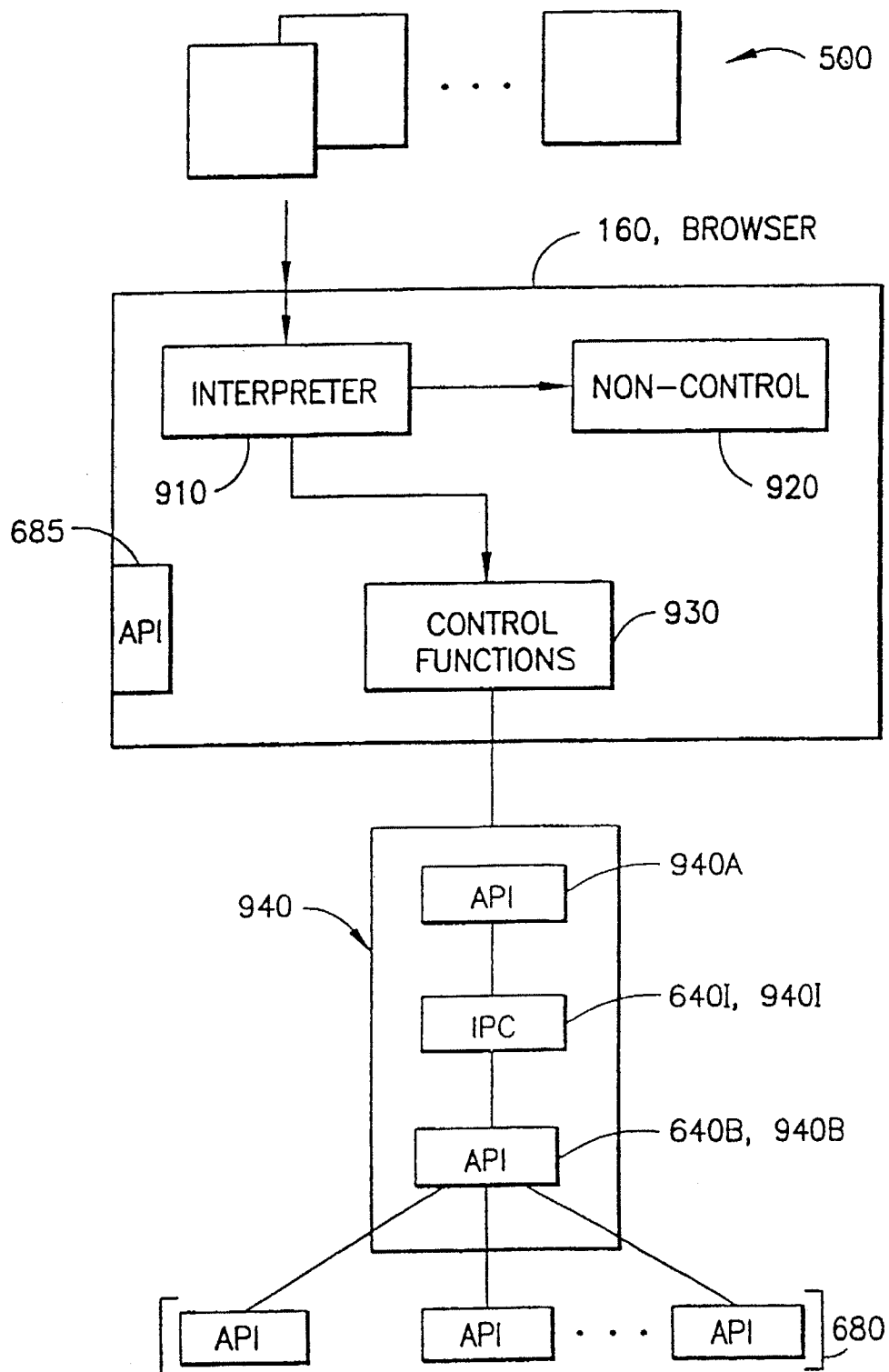


FIG.9

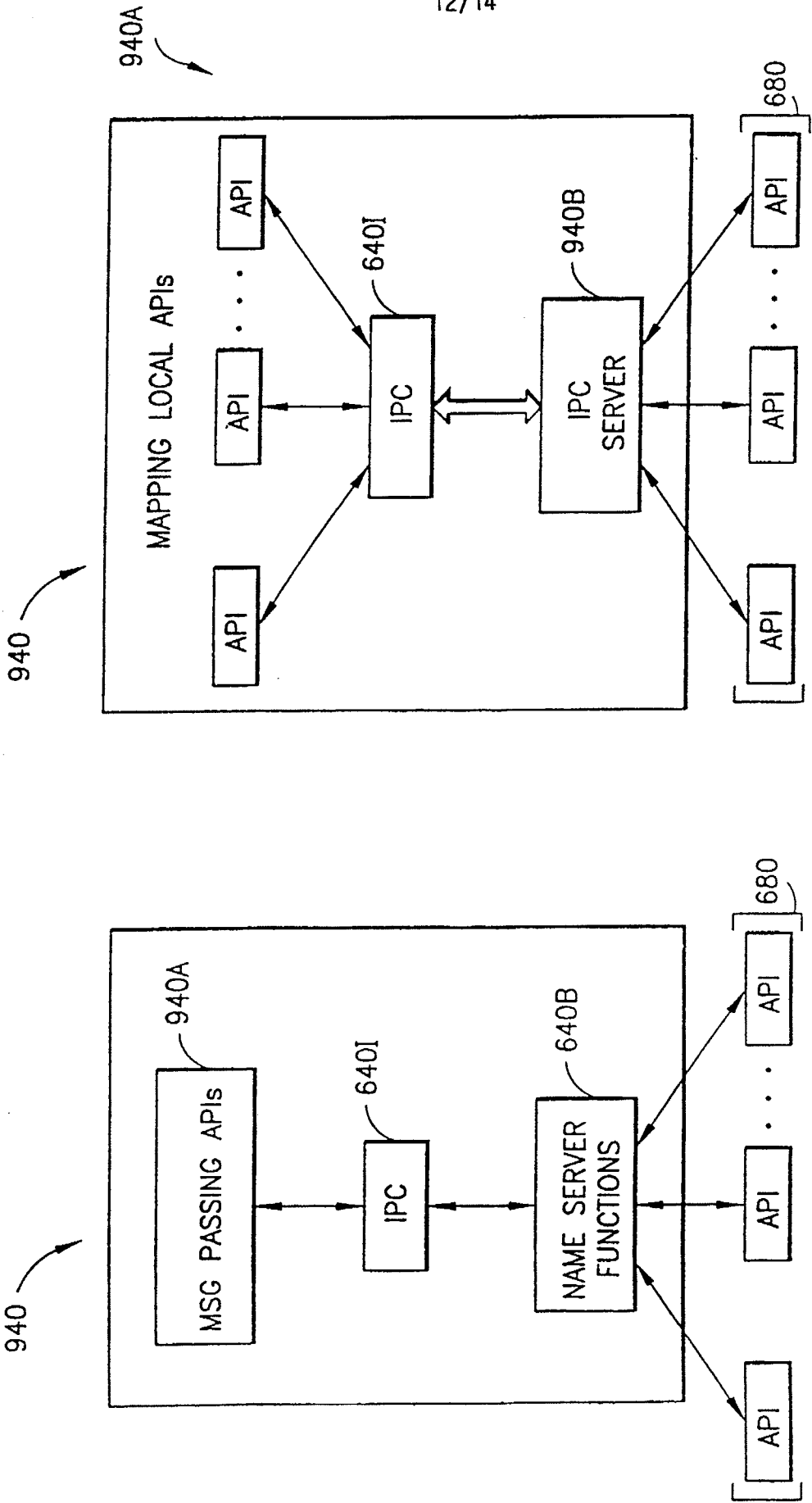


FIG. 9A

FIG. 9B

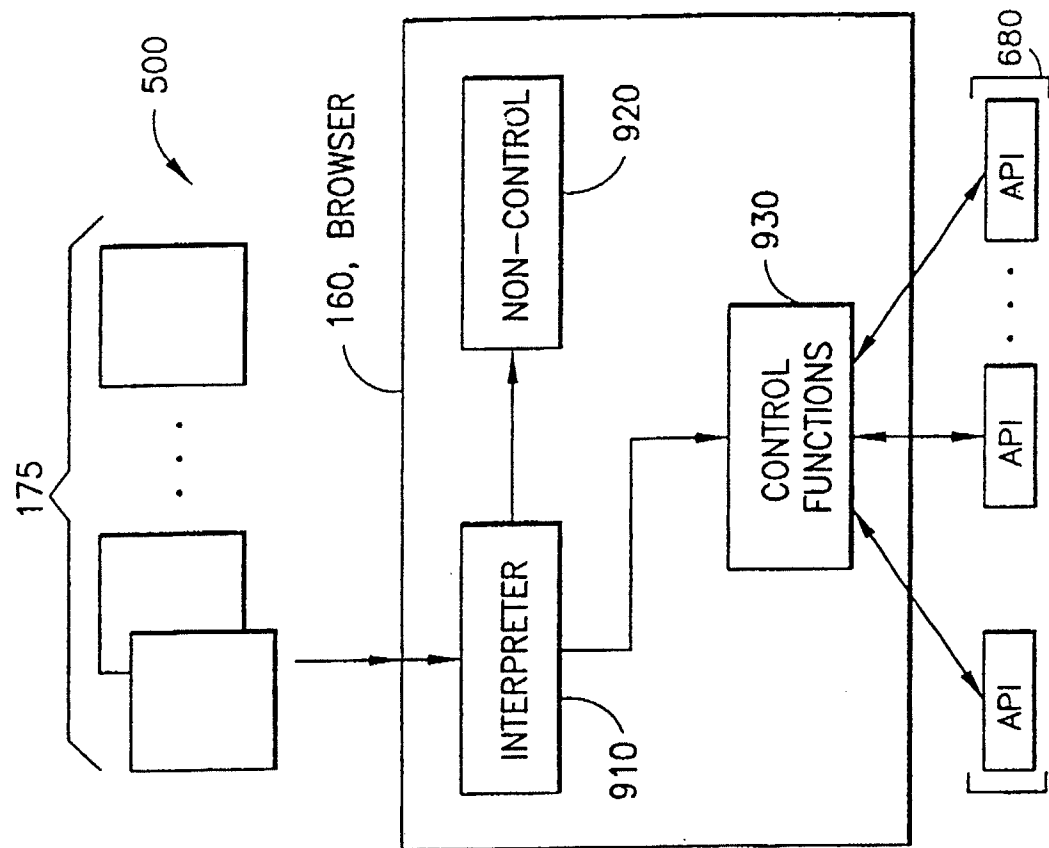


FIG. 9D

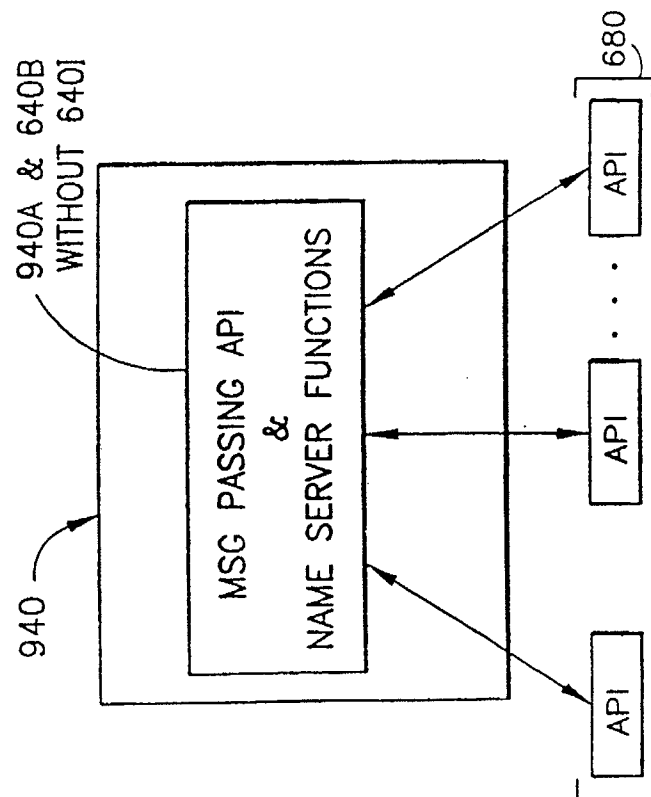


FIG. 9C

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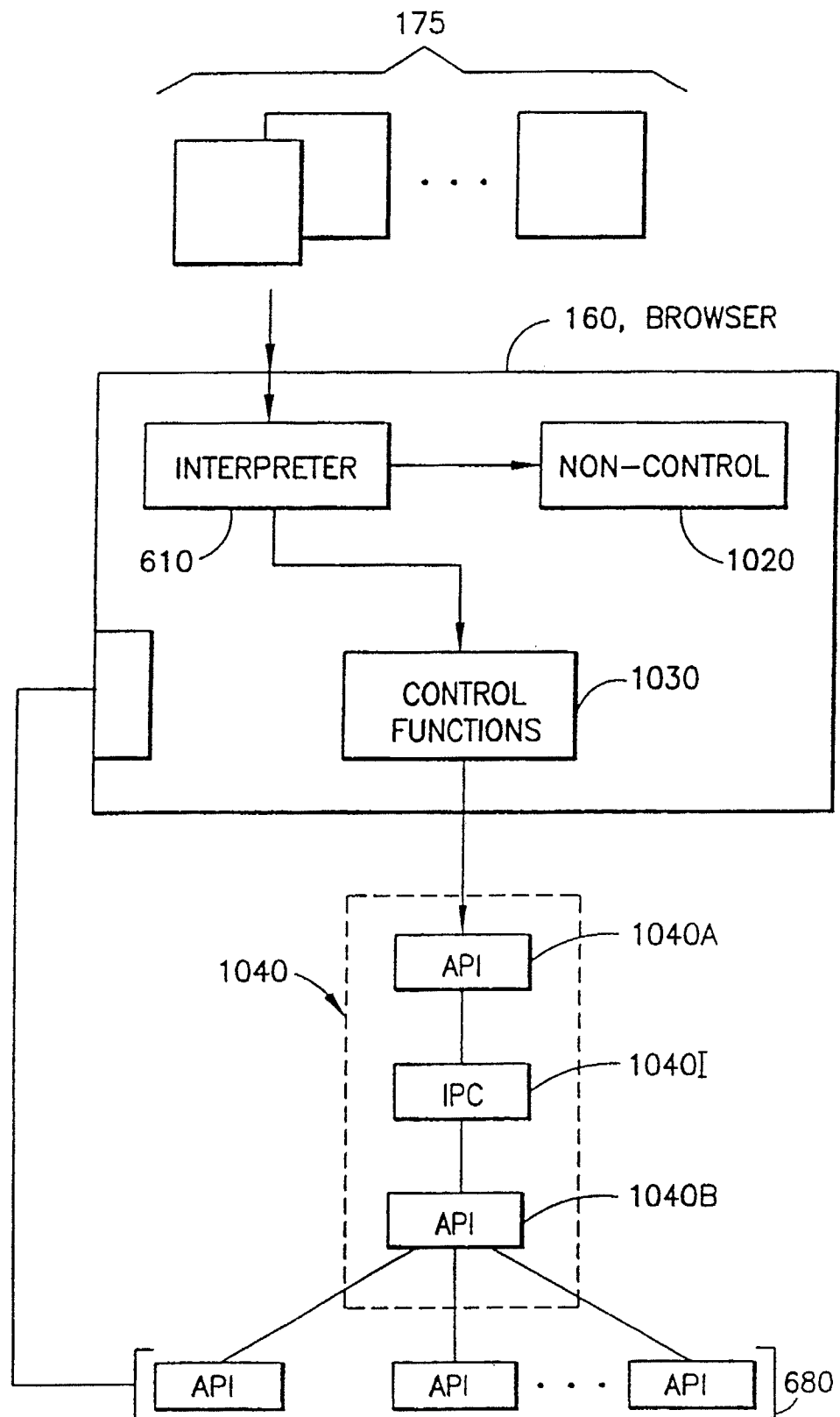


FIG. 10



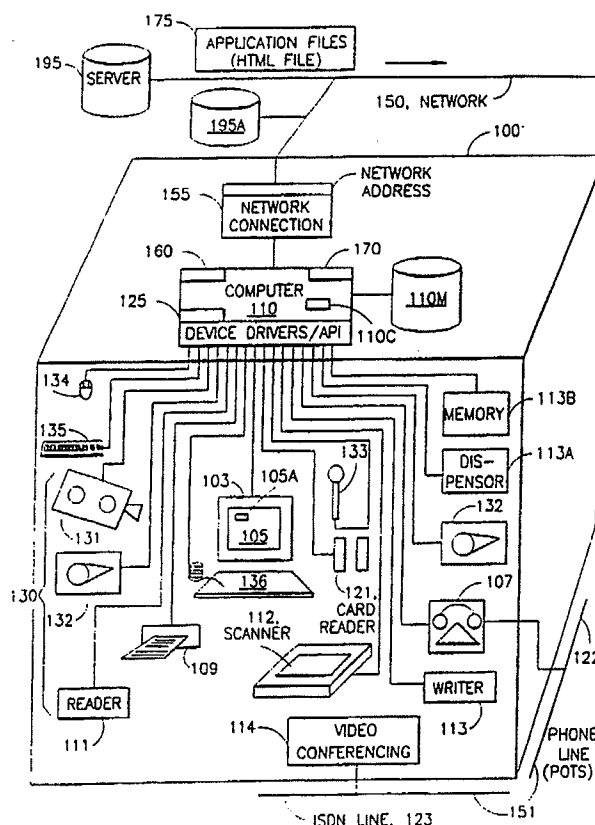
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/GB98/00650		(74) Agent: DAVIES, Simon, Robert; IBM United Kingdom Limited, Intellectual Property Dept., Hursley Park, Winchester, Hampshire SO21 2JN (GB).	
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(71) Applicant: INTERNATIONAL BUSINESS MACHINES CORPORATION [US/US]; Armonk, NY 10504 (US).			
(71) Applicant (for MC only): IBM UNITED KINGDOM LIMITED [GB/GB]; P.O. Box 41, North Harbour, Portsmouth, Hampshire PO6 3AU (GB).			
(72) Inventors: CHEN, Shuang; 208 Briarwood Drive, Somers, NY 10589 (US). FUJISAKI, Tetsunosuke; 4 Wayne Valley Road, Armonk, NY 10504 (US). KOBAYASHI, Makoto; 1840-9, Kanamori, Machida, Tokyo (JP). OHSHIMA, Mitsuru; 2570-1, Shimotsuruma, Yamato City, Kanagawa (JP). YOSHID, Yoichi; 1433-43, Honmachida, Machida-shi, Tokyo 194 (JP).		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
		(88) Date of publication of the international search report: 23 December 1998 (23.12.98)	

(54) Title: KIOSK AND SERVER CONNECTED TO COMPUTER NETWORK

(57) Abstract

A server system (195) is connected to a plurality of kiosks (100) by a network (150), e.g., the Internet, corporate or government intranets, extranets, etc. A kiosk has one or more predetermined input/output devices (130) (e.g. displays, keyboards, paper printers, telephones, etc.) and one or more driver programs (110) (local APIs) for each of the input/output devices (130). The displays (103) are used to present one or more graphical user interfaces (105) and video images to a user of the kiosk (100). The kiosk (100) has a browser (160) which it uses to obtain material from the server (195). The server (195) has one or more application files (175) or configuration sets that it serves to the kiosks (100). The configuration sets are application specific (an application is a use for which the kiosks are configured or reconfigured). One or more of the files in the configuration sets include one or more embedded control programs that are used to control the local APIs for the devices on the kiosk. In this way, the devices are controlled to configure the kiosk to perform the application.



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INTERNATIONAL SEARCH REPORT

International Application No

PC/GB 98/00650

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 H04L29/06 G07F7/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 H04L G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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- / - -

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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Date of the actual completion of the international search

25 August 1998

Date of mailing of the international search report

30. 10. 98

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Dupuis, H

INTERNATIONAL SEARCH REPORT

International Application No

PL./GB 98/00650

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category ^a	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 572 572 A (AHLIN LEO ET AL) 5 November 1996	1,2,4-7, 12-17, 20-22, 25-28, 33-35, 38,39, 44-46, 50-52, 56, 58-62, 64,65, 71-75, 77,78, 81-83, 88-91, 93-96, 98,99, 103-109
X	see column 1, line 22-39 see column 2, line 51 - column 3, line 5 see column 4, line 6-15 see column 5, line 22 - column 7, line 40 see column 9, line 21 - column 14, line 25 see column 16, line 19 - column 20, line 9 see column 22, line 49 - column 26, line 26 -----	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 98/00650

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see additional sheet

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims 1,2,4(as depending on claims 1 and 2),5(as depending on claims 1 and 2),6(aspect a),7,12(as depending on claims 1 and 2 and limited to aspect a),13-14(as depending on claims 1 and 2),15,16,17(aspect a),20(as depending on claims 16 and 17 aspect a),21,22,25,26(as depending on claims 16 and 17 aspect a),28(as depending on claims 16 and 17 aspect a),33(as depending on claims 16 and 17 aspect a, and limited to aspect a),34-35(as depending on claim 17 aspect a),38-39(as depending on claim 17 aspect a),44,45,46(aspect a),50-52,55,58,59,60(aspect a),61,62(aspect a),64,65,71,72(aspect a),73-75,77,78,81-83,88-91,93,94,95(aspect a),96,98,99,103,104(aspect a),105,109.
Apparatus and method for a server and a kiosk, the server and the kiosk comprising a configuration set and an embedded function using an operating status for determining peripherals maintenance history at the kiosk.
2. Claims 1,3,4-5(as depending on claim 3),6,7,8-14(as depending on claim 3),16,20(as depending on claim 16),21,24,45,51,57,90,92.
A server and a kiosk comprising means for communicating with an agent computer.
3. Claims 1,2,5(as depending on claims 1 and 2),6(aspect b),7,9(as depending on claims 1 and 2),16,17(aspect a),20(as depending on claims 16 and 17 aspect a),21,23,26(as depending on claims 16 and 17 aspect a),27(aspect b),30(as depending on claims 16 and 17 aspect a),45,51,56,59,60(aspect b),66,90,94,95(aspect b),100.
A server and a kiosk comprising means for determining kiosk user marketing information.
4. Claims 1,2,8(as depending on claims 1 and 2),10(as depending on claims 1 and 2),11,12(as depending on claims 1 or 2 and limited to aspect b),16,17(aspect a),18(as depending on claims 16 and 17 aspect a),19,29(as depending on claims 16 and 17 aspect a),31(as depending on claims 16 and 17 aspect a, and limited to aspect b),40(as depending on claims 16 and 17 aspect a),41,42-43(as depending on claims 16 and 17 aspect a),45,47-49,62(aspect b),63,67-71,72(aspect b),76,84-87,90,97,101-103,104(aspect b).
A server and a kiosk for communicating HTML configuration files.
5. Claims 16,17(aspect a),17(aspect b),18 as depending on claim 17 aspect b),19,20(as depending on claim 17 aspect b),21-25,26(as depending on claim 17 aspect b),27,28-31(as depending on claim 17 aspect b),32,33-35(as depending on claim 17 aspect b),36-37(as depending on claim 17 aspect a),36-37(as depending on claim 17 aspect b),38-40(as depending on claim 17 aspect b),41,42-43(as depending on claim 17 aspect b),45,46(aspect b),79,80.
A kiosk having a camera.
6. Claims 45,51,53,54.
A kiosk comprising means for applying a fee to select functions.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PC 1 / GB 98/00650

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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